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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BLACKMAN, ANTHONY J

ART UNIT	PAPER NUMBER
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2676

7

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/724,811

Applicant(s)

OLER ET AL.

Examiner

ANTHONY J BLACKMAN

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-14 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Arguments***

1. Applicant's arguments with respect to claims 1-8, 10-14 and 16-20 have been considered but are moot. On Page 9 of AMENDMENT AND REQUEST FOR CONTINUING EXAMINATION, Applicant asserts, "Importantly, Bates fails to teach or suggest contrast adjustment in response to measured environmental temperatures". Applicant is correct in that BATES does not anticipate the features above. However, Bates utilizes a well-known software bar slider/scroll bar interface that controls a contrast adjustment. Therefore, Bates may be used as a secondary supporting the previously cited BURTON, US Patent No. 6,496,177. BURTON becomes the primary reference. BURTON at least suggests contrast adjustment in response to measured environmental temperatures including a microprocessor and software interface means, i.e., "...a selected operational mode (column 4, line 54)", "The operator is generally able to thereafter make adjustments through the use of a contrast adjustment control (column 6, lines 23-25)", column 11, lines 19-28 describes "software control feature", i.e., key panel 230, column 14, lines 1-7 describes an opportunity for the operator to "adjust offset values", and finally, column 17, lines 7-19 discloses, in summary of the BURTON's invention, use of any combination of software, firmware and hardware. Therefore, because applicant has not yet provided claimed subject matter linking the scroll bar function beyond only receiving a "contrast setting", BURTON in view of BATES et al constitute an obvious objection over OLER et al. CATO, US Patent No. 6,433,769 addresses

Art Unit: 2676

notoriously well-known features for analog to digital conversion and flat top panel displays in supporting BURTON as modified. Therefore, contrary to applicant's arguments from paper number 6, CATO is not needed to supply physical environment ambient temperature.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-8, 10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over BURTON, US Patent No. 6,496,177 in view of BATES et al, US Patent No. 5,532,715.

4. As per claim 1, examiner interprets BURTON to disclose "[I]n an electronic device having a display (column 5, lines 39-50) and a processor (column 16, lines 54-65), a method for providing contrast adjustment (column 5, lines 39-50) for said display comprising:

(a) receiving a contrast setting that is user defined parameters in a software graphical user interface (BURTON at least suggests contrast adjustment in response to measured environmental temperatures including a microprocessor and software interface means, i.e., "...a selected operational mode (column 4, line 54)", "The operator is generally able to thereafter make adjustments through

Art Unit: 2676

the use of a contrast adjustment control (column 6, lines 23-25)", column 11, lines 19-28 describes "software control feature", i.e., key panel 230, column 14, lines 1-7 describes an opportunity for the operator to "adjust offset values", and finally, column 17, lines 7-19 discloses, in summary of the BURTON's invention, use of any combination of software, firmware and hardware.), wherein said graphical user interface comprises user operator means such as contrast control buttons or knobs...accessed through the key panel 230 (column 11, lines 19-28)

b) generating signals representative of the ambient temperature of said display over time (figure 3, element 312, column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50);

c) sampling said signals and converting said signals into current temperature values (column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50);

d) based on said contrast setting and said current temperature values contrast adjustment voltage signal for maintaining said contrast setting (column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50) wherein said steps c) and d) are performed by said processor/LCD contrast controller (column 16, lines 54-65 and column 7, lines 7-19 and , figures 2-3 and 7 featuring element 202, respectively), and

e) automatically adjusting contrast of said display by applying said contrast adjustment voltage signal to said display (column 16, lines 54-65 and column 17, lines 7-19), however, even though BURTON suggests receiving a contrast setting that is user defined parameters in a software graphical user interface (BURTON at least suggests contrast adjustment in response to measured

Art Unit: 2676

environmental temperatures including a microprocessor and software interface means, i.e., "...a selected operational mode (column 4, line 54)", "The operator is generally able to thereafter make adjustments through the use of a contrast adjustment control (column 6, lines 23-25)", column 11, lines 19-28 describes "software control feature", i.e., key panel 230, column 14, lines 1-7 describes an opportunity for the operator to "adjust offset values", and finally, column 17, lines 7-19 discloses, in summary of the BURTON's invention, use of any combination of software, firmware and hardware.), wherein said graphical user interface comprises user operator means such as contrast control buttons or knobs...accessed through the key panel 230 (column 11, lines 19-28) , there is no express teaching of a slider bar or scroll bar or the like.

BATES et al describes a slider bar/scroll bar means associated with graphical user interface (column 1, lines 38-52). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

Art Unit: 2676

5. As per claim 2, BURTON as modified to meet limitations of claim 1, including, "...further comprising the step of f) repeating steps b) - d) (column 16, lines 54-65 and column 7, lines 7-19)". It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

6. As per claim 3, BURTON as modified meet limitations of claim 1 wherein (b) comprises using a temperature sensitive diode circuit/temperature sensor 204 to generate a voltage signal based on said ambient temperature (column 3, line 66-column 10, line 10 and column 11, lines 35-45). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12) to modify a liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230

Art Unit: 2676

(column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

7. As per claim 5, BURTON as modified meet limitations of teach a method as described in claim 1 wherein said step d) comprises the step of indexing a look-up table (figure 4, elements of ambient temperature and contrast voltage variations/element 308 represent the lookup table and column 10, lines 46-65) with said contrast setting (figure 4, element 308 and column 10, lines 46-65) and said current temperature values to compute said contrast adjustment voltage signal (figure 4, element 308 and column 10, lines 46- 65).

It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of

Art Unit: 2676

scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

8. As per claim 6, examiner interprets BURTON as modified to meet limitations of teaching a method as described in claim 1, wherein said step d) comprises the step of inputting said contrast setting (figure 2, elements 230-key panel and 210 contrast control and column 9, line 66, column 10, line 10) and said current temperature values (figure 2, element 101-ambient temperature and column 9, line 66-column 10, line 10) to a formula to compute said adjustment voltage signal (column 10, lines 34-49). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

9. As per claim 7, BURTON as modified meet limitations of claim 1 wherein said display comprises a liquid crystal display (LCD) display screen (column 9,

Art Unit: 2676

lines 7-40). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

10. As per claim 8, BURTON as modified meet limitations of claim 1 wherein said electronic device comprises a portable hand-held computer system (figure 7, column 15, line 49-column 16, line 53). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify

Art Unit: 2676

BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

11. As per claim 10, the means of an electronic device comprising:

A processor/LCD contrast controller (figures 2-3 and 7 featuring element 202) coupled to a bus (figure 2 discloses the various paths/buses); a display coupled to said bus and responsive to a contrast adjustment signal (figure 3, element 202 connected to element 206 and contrast adjustment signal/contrast voltage selector 314), a temperature sensing circuit for generating signals representative of the ambient temperature of said display over time (figure 3, element 312, column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50), and wherein said processor (figures 2-3 and 7 featuring element 202) automatically compensates display contrast based on said ambient temperature/programming and data storage techniques (column 16, lines 54-65 and column 17, lines 7-19) by performing the steps of: a) receiving a contrast setting/scroll bar parameters that is user defined via a software graphical user interface ((BURTON at least suggests contrast adjustment in response to measured environmental temperatures including a microprocessor and software interface means, i.e., "...a selected operational mode (column 4, line 54)", "The operator is generally able to thereafter make adjustments through the use of a contrast adjustment control (column 6, lines 23-25)", column 11, lines 19-28 describes "software control feature", i.e., key panel 230, column 14, lines 1-7 describes an opportunity for the operator to "adjust offset values", and finally, column 17, lines 7-19 discloses,

Art Unit: 2676

in summary of the BURTON's invention, use of any combination of software, firmware and hardware.), wherein said graphical user interface comprises user operator means such as contrast control buttons or knobs...accessed through the key panel 230 (column 11, lines 19-28);

b) sampling said signals and converting said signals into current temperature values ((column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50);

c) based on said contrast setting and said current temperature values ((column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50), computing a contrast adjustment voltage signal for maintaining said contrast setting(column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50); and

d) automatically adjusting contrast of said display by applying said contrast adjustment voltage signal to said display (column 16, lines 54-65 and column 17, lines 7-19). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control

apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

Art Unit: 2676

12. As per claim 12, examiner interprets BATES et al to meet limitations of teach a method as described in claim 10, wherein said step c) comprises the step of indexing a look-up table (figure 4, elements of ambient temperature and contrast voltage variations/element 308 represent the lookup table and column 10, lines 46-65) with said contrast setting and said current temperature values to compute said contrast adjustment voltage signal (figure 4, elements of ambient temperature and contrast voltage variations/element 308 represent the lookup table and column 10, lines 46-65).

It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

13. As per claim 13, BURTON as modified meet the step of inputting said contrast setting and said current temperature values to a formula to compute said contrast adjustment voltage signal (figure 2, elements 230-key panel and 210

Art Unit: 2676

contrast control and column 9, line 66, column 10, line 10). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

14. As per claim 14, BURTON as modified meet limitations of claim 10 wherein said display screen comprises a liquid crystal display (LCD) display screen (column 9, lines 7-40) and wherein said electronic device is a portable hand-held computer system (figure 7, column 15, line 49-column 16, line 53). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON because

Art Unit: 2676

both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

15. Claims 4, 11 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over BURTON, US Patent No. 6,496,177 in view of BATES et al, US Patent No. 5,532,715 and further in view of CATO, US Patent No. 6,433,769.

16. As per claim 16, BURTON meet features of claim 16 as follows:

A processor/LCD contrast controller (figures 2-3 and 7 featuring element 202) coupled to a bus (figure 2 discloses the various paths/buses); a display coupled to said bus and responsive to a contrast adjustment signal (figure 3, element 202 connected to element 206 and contrast adjustment signal/contrast voltage selector 314), a temperature sensing circuit for generating signals representative of the ambient temperature of said display over time (figure 3, element 312, column 9, lines 7-40, column 12, lines 38-67, column 13, lines 36-50), and wherein said processor (figures 2-3 and 7 featuring element 202) automatically compensates display contrast based on said ambient temperature/programming and data storage techniques (column 16, lines 54-65 and column 17, lines 7-19) by performing the steps of: a) receiving a contrast setting that is user defined via an interactive graphical user interface displayed on said display (BURTON at least suggests contrast adjustment in response to measured environmental

Art Unit: 2676

temperatures including a microprocessor and software interface means, i.e., "...a selected operational mode (column 4, line 54)", "The operator is generally able to thereafter make adjustments through the use of a contrast adjustment control (column 6, lines 23-25)", column 11, lines 19-28 describes "software control feature", i.e., key panel 230, column 14, lines 1-7 describes an opportunity for the operator to "adjust offset values", and finally, column 17, lines 7-19 discloses, in summary of the BURTON's invention, use of any combination of software, firmware and hardware.), wherein said graphical user interface comprises user operator means such as contrast control buttons or knobs...accessed through the key panel 230 (column 11, lines 19-28);

b) sampling said signals and converting said signals into current temperature values (column 9, lines 7-40, column 12, lines 38-67 and column 13, lines 36-50);

c) based on said contrast setting and said current temperature values, computing a contrast adjustment voltage signal for maintaining said contrast setting (column 9, lines 7-40, column 12, lines 38-67 and column 13, lines 36-50); and

d) automatically adjusting contrast of said display by applying said contrast adjustment voltage signal to said display (column 16, lines 54-65 and column 17, lines 7-19), however, BURTON does not expressly teach an interactive slide bar/scroll bar of a graphical user interface displayed on said display. BATES et al suggest an interactive slide bar/scroll bar of a graphical user interface displayed on said display means associated with graphical user interface (column 1, lines 38-52). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that

Art Unit: 2676

provides a view into a presentation space (column 1, lines 5-12)” to modify a “liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)” of BURTON because both BATES et al and BURTON share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast. However, BURTON as modified does not expressly teach or suggest *a palm-top computer system nor a flat panel display. CATO, on the other hand suggests both laptop/flat panel or portable displays (column 1, lines 50-59).*

It would have been obvious to one skilled in the art at the time of the invention to use prior art methods for ambient temperature sensing circuits as well as *laptop/flat panel or portable displays* of CATO to modify digital temperature sensing means of BURTON because both inventions share similar technological environments associated with contrast control settings related to variations in temperature. Further, because both inventions are related to similar technological environments associated with contrast control temperature sensing means (CATO –hardware means and BURTON –software/graphical user interface means as well as hardware, firmware and any combination of the three), it would have been obvious to modify BURTON by CATO because CATO suggests the hardware (i.e., diodes and LCD means) lacking with BURTON as

Art Unit: 2676

modified's software method that suggests utilization of hardware circuits to implement the software instructions.

17. As per claim 18, BURTON as modified meet limitations of claim 16, wherein said c) comprises indexing a look-up table with said contrast setting and said current temperature values to compute said contrast adjustment voltage signal (figure 4, elements of ambient temperature and contrast voltage variations/element 308 represent the lookup table and column 10, lines 46-65). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON as modified because both BATES et al and BURTON as modified share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON as modified with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

18. As per claim 19, BURTON as modified meet limitations of claim 16 wherein said c) comprises inputting said contrast setting and said current temperature values to a formula to compute said contrast adjustment voltage

Art Unit: 2676

signal (figure 2, elements 230-key panel and 210 contrast control and column 9, line 66,column 10, line 10). It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON as modified because both BATES et al and BURTON as modified share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON as modified with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

19. As per claim 20, BURTON as modified meet limitations of claim 16 wherein said display screen comprises a liquid crystal display (LCD) display screen and wherein said electronic device comprises a portable hand-held computer system (figure 7, column 15, line 49-column 16, line 53).

It would have been obvious to one skilled in the art at the time of the invention to utilize well-known "...scroll bar associated with a display window that provides a view into a presentation space (column 1, lines 5-12)" to modify a "liquid crystal display (LCD) temperature compensation control apparatus...controls the contrast...based on ambient temperature that may be controlled by contrast control 210 and key panel 230 (column 11, lines 19-28)" of BURTON as modified

Art Unit: 2676

because both BATES et al and BURTON as modified share similar technological environments associated with graphical user interface devices controlling contrast. Therefore, it would have been obvious to modify BURTON as modified with BATES et al because use of scroll bars/slider bars are well-known graphical user interface devices set to control contrast.

20. As per claims 4, 11 and 17 BURTON as modified meet limitations of claims 3, 10 and 16, however, even though BURTON suggests use of digital temperature sensors, does not expressly teach limitations of claims 4, 11 and 17. Examiner interprets CATO to suggest, "...wherein said b) further comprises using an analog to digital converter to convert said voltage signal into a digital value (cites prior art methods for ambient temperature sensing circuits-column 1, lines 28-37). It would have been obvious to one skilled in the art at the time of the invention to use prior art methods for ambient temperature sensing circuits of CATO to modify digital temperature sensing means of BURTON because both inventions share similar technological environments associated with contrast control settings related to variations in temperature. Further, Because both inventions are related to similar technological environments associated with contrast control temperature sensing means (CATO –hardware means and BURTON –software/graphical user interface means as well as hardware, firmware and any combination of the three), it would have been obvious to modify BURTON by CATO because CATO suggests the hardware (i.e., diodes and

Art Unit: 2676

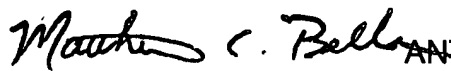
LCD means) lacking with BURTON as modified's software method that suggests utilization of hardware circuits to implement the software instructions.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J BLACKMAN whose telephone number is 703-305-0833. The examiner can normally be reached Monday-Friday on an eight-hour FLEX SCHEDULE.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 703-308-6829. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600



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